QC ABSTRACT

NAME OF WORK: Package No. 04 (Package Consists of 28 Works)

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Mass Concrete (M20)	Compressive Strength(7days and 28days)	4 set /31-50 cum	33.97	8	8
7	WMM	Sieve Analysis	One Test		1	1
		Impact Value	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
8	BM	SIEVE ANALYSIS	One Test		1	1
		STRIPPING VALUE	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		IMPACT VALUE	One Test		1	1
		Specific gravity	One Test		1	1
		Water Absorption	One Test		1	1
		Marshal Stability	One Test		1	1
		Marshal flow	One Test		1	1
		Percent air Voids	One Test		1	1
		Percent Voids in mineral	One Test		1	1
		Percent Voids filled with Bitumen	One Test		1	1
		Density	One Test		1	1
		Gradation	One Test		1	1
9	BITUMEN	Ductility	One Test		1	1
		Softening Point	One Test		1	1
		Penetration	One Test		1	1
		Flash Point	One Test		1	1
		Fire Point	One Test		1	1

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : **CP-2020-08-05-05** **Date: 04-08-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer's Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 01-08-18

Sample Type : Birla Super 53grade

Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6

Date of test : 02-08-18

Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.8	–
2	Finess by Air permeablity method (m^2/kg,Min)	295.9	225m^2/kg, Min
3	Density (gm/cc)	3.15	–
4	Standard Consistency (%)	0.285	Not specified
5	Initial Setting time	145 minutes	Not less than 30 minutes
6	Final Setting time	255 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.0mm	Not more than 10 mm

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-08-05-05**	**Date: 30-08-18**
Project Name	:	Package No. 04 (Package Consists of 28 Works)	
Agency	:	M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013	
Customer's Reference	:	BBMP/EE/BTP/WO/129/2017-18	
Date of Receipt	:	01-08-18	
Sample Type	:	Birla Super 53grade	
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6	
Date of test	:	02-08-18	
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%	

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-08-05-05** **Date: 04-08-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer's Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 01-08-18

Sample Type : 40mm down size coarse aggregate

Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
IS 2386 Part 4: Mechanical Properties

Date of test : 01-08-18

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : **15000** **grams**

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	423	423	2.8	97.2	90-100
3	20 mm	5852	6275	41.8	58.2	30-70
4	10 mm	4232	10507	70.0	30.0	10-35
5	4.75 mm	4225	14732	98.2	1.8	0-5
6	Pan	268	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-08-05-05** **Date: 04-08-18**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.3	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.5	
3	Specific Gravity	2.68	_
4	Bulk Density(Loose) (Kg/l)	1.56	_
5	Bulk Density(Compacted) (Kg/l)	1.59	_
6	Water Absorption(%)	0.21	_

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-08-05-05** **Date: 03-08-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 01-08-18

Sample Type/ Size : 20mm down size coarse aggregate

Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
IS 2386 Part 4: Mechanical Properties

Date of test : 01-08-18

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : **5000** **grams**

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	245	245	4.9	95.1	90-100
3	10 mm	2560	2805	56.1	43.9	25-55
4	4.75 mm	2033	4838	96.8	3.2	0-10
5	Pan	162	5000	100	0	_

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-08-05-05** **Date: 03-08-18**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	13.2	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.6	
3	Specific Gravity	2.66	_
4	Bulk Density(Loose) (Kg/l)	1.54	_
5	Bulk Density(Compacted) (Kg/l)	1.58	_
6	Water Absorption(%)	0.22	_
7	Aggregate crushing Value(%)	24.5	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	22.8	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-08-05-05** **Date: 03-08-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer's Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 01-08-18

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

Date of test : 01-08-18

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
3	2.36 mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
4	1.18 mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
5	600 micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
6	300 micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
7	150 micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-08-05-05** **Date: 03-08-18**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.5	_
2	Specific Gravity	2.59	_
3	Material finer than 75 micron(%)	6.9	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-08-05-05** **Date: 13/08/2018**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer's Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 08-08-18

Customer ID : Mass Concrete for Badmitton Poles

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 13/08/2018

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Mass Concrete for Badmitton Poles	M20	06/08/2018	13/08/2018	151.01 X 151.63 X 150.90	22898	**8.892**	416.5	18.2	18.2
2	Mass Concrete for Badmitton Poles	M20	06/08/2018	13/08/2018	151.04 X 150.43 X 150.78	22721	**8.178**	414.3	18.2	
3	Mass Concrete for Badmitton Poles	M20	06/08/2018	13/08/2018	149.64 X 151.19 X 149.92	22623	**9.048**	409.2	18.1	

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-08-05-05** **Date: 03/09/2018**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer's Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 08-08-18

Customer ID : Mass Concrete for Badmitton Poles

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/09/2018

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Mass Concrete for Badmitton Poles	M20	06/08/2018	03/09/2018	149.85 X 149.43 X 150.62	22392	**8.403**	522.0	23.3	23.1
2	Mass Concrete for Badmitton Poles	M20	06/08/2018	03/09/2018	151.83 X 150.69 X 151.67	22880	**8.618**	518.1	22.6	
3	Mass Concrete for Badmitton Poles	M20	06/08/2018	03/09/2018	151.19 X 150.68 X 150.06	22782	**8.111**	529.4	23.2	

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-08-05-05** **Date: 13/08/2018**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer's Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 08-08-18

Customer ID : Mass Concrete for Badmitton Poles

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 13/08/2018

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Mass Concrete for Badmitton Poles	M20	06/08/2018	13/08/2018	150.64 X 150.12 X 151.46	22615	**8.623**	418.0	18.5	18.5
2	Mass Concrete for Badmitton Poles	M20	06/08/2018	13/08/2018	149.02 X 150.28 X 151.23	22396	**8.590**	414.7	18.5	
3	Mass Concrete for Badmitton Poles	M20	06/08/2018	13/08/2018	149.39 X 151.48 X 150.76	22630	**8.729**	420.4	18.6	

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID	:	**CP-2020-08-05-05** **Date: 03/09/2018**
Project Name	:	Package No. 04 (Package Consists of 28 Works)
Agency	:	M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013
Customer's Reference	:	BBMP/EE/BTP/WO/129/2017-18
Date of Receipt	:	08-08-18
Customer ID	:	Mass Concrete for Badmitton Poles
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M20 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
Date of test	:	03/09/2018

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Mass Concrete for Badmitton Poles	M20	06/08/2018	03/09/2018	149.64 X 150.00 X 151.09	22447	**9.091**	521.1	23.2	22.8
2	Mass Concrete for Badmitton Poles	M20	06/08/2018	03/09/2018	151.77 X 151.31 X 149.99	22963	**8.559**	505.7	22.0	
3	Mass Concrete for Badmitton Poles	M20	06/08/2018	03/09/2018	151.55 X 149.74 X 150.38	22693	**8.539**	527.1	23.2	

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-08-05-05** **Date: 28/08/2018**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer's Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 23-08-18

Customer ID : Mass Concrete for Barricading Poles

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 28/08/2018

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Mass Concrete for Barricading Poles	M20	21/08/2018	28/08/2018	151.18 X 149.21 X 150.94	22557	**8.623**	410.2	18.2	18.7
2	Mass Concrete for Barricading Poles	M20	21/08/2018	28/08/2018	151.02 X 150.07 X 150.48	22663	**8.590**	428.0	18.9	
3	Mass Concrete for Barricading Poles	M20	21/08/2018	28/08/2018	150.44 X 151.76 X 151.48	22831	**8.729**	432.2	18.9	

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-08-05-05** **Date: 18/09/2018**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer's Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 23-08-18

Customer ID : Mass Concrete for Barricading Poles

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 18/09/2018

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Mass Concrete for Barricading Poles	M20	21/08/2018	18/09/2018	149.42 X 149.41 X 151.20	22325	**9.091**	526.4	23.6	23.0
2	Mass Concrete for Barricading Poles	M20	21/08/2018	18/09/2018	149.50 X 151.62 X 151.88	22668	**8.559**	500.5	22.1	
3	Mass Concrete for Barricading Poles	M20	21/08/2018	18/09/2018	150.89 X 150.74 X 149.51	22746	**8.539**	534.4	23.5	

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-08-05-05** **Date: 12/09/2018**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer's Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 07-09-18

Customer ID : Mass Concrete for Flood Light Poles

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 12/09/2018

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Mass Concrete for Flood Light Poles	M20	05/09/2018	12/09/2018	151.88 X 150.55 X 151.42	22866	**8.623**	415.8	18.2	18.6
2	Mass Concrete for Flood Light Poles	M20	05/09/2018	12/09/2018	150.13 X 151.29 X 150.36	22713	**8.590**	430.1	18.9	
3	Mass Concrete for Flood Light Poles	M20	05/09/2018	12/09/2018	149.66 X 150.48 X 150.92	22521	**8.729**	423.1	18.8	

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-08-05-05** **Date: 03/10/2018**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer's Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 07-09-18

Customer ID : Mass Concrete for Flood Light Poles

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/10/2018

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Mass Concrete for Flood Light Poles	M20	05/09/2018	03/10/2018	149.95 X 151.92 X 149.90	22780	**9.091**	533.7	23.4	23.2
2	Mass Concrete for Flood Light Poles	M20	05/09/2018	03/10/2018	150.59 X 149.13 X 150.98	22457	**8.559**	508.3	22.6	
3	Mass Concrete for Flood Light Poles	M20	05/09/2018	03/10/2018	150.94 X 149.49 X 150.72	22565	**8.539**	531.4	23.5	

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 25-04-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 23-04-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 23-04-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 26-04-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 24-04-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 24-04-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 28-04-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 25-04-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 25-04-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 28-04-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 26-04-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 26-04-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 30-04-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 27-04-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 27-04-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 30-04-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 28-04-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 28-04-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 02-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 30-04-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 30-04-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 03-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 01-05-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 01-05-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 04-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 02-05-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 02-05-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 05-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 03-05-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 03-05-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 07-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 04-05-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 04-05-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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End of Report

TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 07-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 05-05-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 05-05-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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End of Report

TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-08-05-05** **Date: 10-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 07-05-18

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 07-05-18

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

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TESTS RESULTS ON STABILITY OF MIX

Lab ID : **CP-RW-2020-08-05-05** **Date: 21-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 18-05-18

Type of Mix : BM (Bituminous Mecadam)

Date of test : 18-05-18

The results of the tests conducted on the Bituminous Macadam mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.29	11.82	9KN(Min)
2	Marshal flow at 60°C, mm	3.54	3.87	2-4
3	Percent air Voids	4.56	4.17	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.54	14.76	13-15
5	Percent Voids filled with Bitumen(VFB %)	68.98	70.28	65-75
6	Density, g/cc	2.42	2.40	–

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : **CP-RW-2020-08-05-05** **Date: 23-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 21-05-18

Type of Mix : BM (Bituminous Macadam)

Date of test : 21-05-18

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	470	465
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	6	7.00
4	Average percentage	%	6.50	

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

Lab ID : **CP-RW-2020-08-05-05** **Date: 23-05-18**

AFTER EXTRACTION(Trail-1)

Weight of Sample : 470 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.1	91.9	90-100
13.2	147	185	39.4	60.6	56-88
4.75	191	376	80.0	20.0	16-36
2.36	28	404	86.0	14.0	4-19
0.3	32	436	92.8	7.2	2-10
0.075	31	467	99.4	0.6	0-8

AFTER EXTRACTION(Trail-2)

Weight of Sample : 465 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.2	91.8	90-100
13.2	147	185	39.8	60.2	56-88
4.75	191	376	80.9	19.1	16-36
2.36	28	404	86.9	13.1	4-19
0.3	28	432	92.9	7.1	2-10
0.075	30	462	99.4	0.6	0-8

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End of Report

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : **CP-RW-2020-08-05-05** **Date: 23-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 22-05-18

Type of Mix : BM (Bituminous Macadam)

Date of test : 22-05-18

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	470	465
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	6	7.00
4	Average percentage	%	6.50	

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Lab ID : **CP-RW-2020-08-05-05** **Date: 23-05-18**

AFTER EXTRACTION(Trail-1)

Weight of Sample : 470 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.1	91.9	90-100
13.2	147	185	39.4	60.6	56-88
4.75	191	376	80.0	20.0	16-36
2.36	28	404	86.0	14.0	4-19
0.3	32	436	92.8	7.2	2-10
0.075	31	467	99.4	0.6	0-8

AFTER EXTRACTION(Trail-2)

Weight of Sample : 465 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.2	91.8	90-100
13.2	147	185	39.8	60.2	56-88
4.75	191	376	80.9	19.1	16-36
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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : **CP-RW-2020-08-05-05** **Date: 24-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 23-05-18

Type of Mix : BM (Bituminous Macadam)

Date of test : 23-05-18

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	470	465
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	6	7.00
4	Average percentage	%	6.50	

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Lab ID : CP-RW-2020-08-05-05 Date: 24-05-18

AFTER EXTRACTION(Trail-1)

Weight of Sample : 470 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.1	91.9	90-100
13.2	147	185	39.4	60.6	56-88
4.75	191	376	80.0	20.0	16-36
2.36	28	404	86.0	14.0	4-19
0.3	32	436	92.8	7.2	2-10
0.075	31	467	99.4	0.6	0-8

AFTER EXTRACTION(Trail-2)

Weight of Sample : 465 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.2	91.8	90-100
13.2	147	185	39.8	60.2	56-88
4.75	191	376	80.9	19.1	16-36
2.36	28	404	86.9	13.1	4-19
0.3	28	432	92.9	7.1	2-10
0.075	30	462	99.4	0.6	0-8

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End of Report

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : **CP-RW-2020-08-05-05** **Date: 25-05-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 24-05-18

Type of Mix : BM (Bituminous Macadam)

Date of test : 24-05-18

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	470	465
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	6	7.00
4	Average percentage	%	6.50	

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Lab ID : **CP-RW-2020-08-05-05** **Date: 25-05-18**

AFTER EXTRACTION(Trail-1)

Weight of Sample : 470 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.1	91.9	90-100
13.2	147	185	39.4	60.6	56-88
4.75	191	376	80.0	20.0	16-36
2.36	28	404	86.0	14.0	4-19
0.3	32	436	92.8	7.2	2-10
0.075	31	467	99.4	0.6	0-8

AFTER EXTRACTION(Trail-2)

Weight of Sample : 465 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.2	91.8	90-100
13.2	147	185	39.8	60.2	56-88
4.75	191	376	80.9	19.1	16-36
2.36	28	404	86.9	13.1	4-19
0.3	28	432	92.9	7.1	2-10
0.075	30	462	99.4	0.6	0-8

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : **CP-RW-2020-08-05-05** **Date: 01-06-18**

Project Name : Package No. 04 (Package Consists of 28 Works)

Agency : M/s. Ram and Company, Sri.C R Girish, No.12, Patel Pillegowda Layout, Ramachandrapura, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/129/2017-18

Date of Receipt : 31-05-18

Type of Mix : BM (Bituminous Macadam)

Date of test : 31-05-18

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	470	465
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	6	7.00
4	Average percentage	%	6.50	

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Lab ID : **CP-RW-2020-08-05-05** **Date: 01-06-18**

AFTER EXTRACTION(Trail-1)

Weight of Sample : 470 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.1	91.9	90-100
13.2	147	185	39.4	60.6	56-88
4.75	191	376	80.0	20.0	16-36
2.36	28	404	86.0	14.0	4-19
0.3	32	436	92.8	7.2	2-10
0.075	31	467	99.4	0.6	0-8

AFTER EXTRACTION(Trail-2)

Weight of Sample : 465 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.2	91.8	90-100
13.2	147	185	39.8	60.2	56-88
4.75	191	376	80.9	19.1	16-36
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